LNP™ THERMOCOMP™ COMPOUND LX03447

PDX-L-03447

DESCRIPTION

LNP THERMOCOMP LX03447 compound is based on Polyetheretherketone (PEEK) resin containing 35% carbon fiber. Added features of this grade include: Electrically Conductive.

GENERAL INFORMATION	
Features	Electrically Conductive, Carbon fiber filled, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Carbon Fiber
Polymer Types	Polyetheretherketone (PEEK)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Commercial Appliance
Electrical and Electronics	Electronic Components, Mobile Phone - Computer - Tablets
Industrial	Electrical, Material Handling

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	248	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.6	%	ASTM D638
Tensile Modulus, 50 mm/min	28540	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	370	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	365	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	23700	MPa	ASTM D790
Tensile Stress, break, 5 mm/min	246	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	28350	MPa	ISO 527
Flexural Stress	360	MPa	ISO 178
Flexural Modulus, 2 mm/min	23800	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	771	J/m	ASTM D4812
Izod Impact, notched, 23°C	70	J/m	ASTM D256
Multiaxial Impact	3	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	7	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	6	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	337	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	325	°C	ASTM D648
CTE, -30°C to 30°C, flow	9.0E-06	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	3.9E-05	1/°C	ASTM D696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	335	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	318	°C	ISO 75/Af
PHYSICAL (1)			
Density	1.43	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.05	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (2)	0.1 – 0.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (2)	0.5 – 0.9	%	ASTM D955
Moisture Absorption (23°C / 50% RH)	0.07	%	ISO 62
INJECTION MOLDING (3)			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Front - Zone 3 Temperature	380 – 400	°C	
Middle - Zone 2 Temperature	380 – 400	°C	
Rear - Zone 1 Temperature	370 – 380	°C	
Mold Temperature	175 – 190	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	60 – 100	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.